

What is claimed is:

1. An energy conditioner comprising:
 - an internally floating shield structure;
 - a first electrode structure;
 - a second electrode structure;wherein said first electrode structure comprises at least one first electrode structure first conductive layer, said second electrode structure comprises at least one second electrode structure first conductive layer;
wherein said internally floating shield structure shields said first electrode structure first conductive layer from said second electrode structure, and said internally floating shield structure shields said second electrode structure first conductive layer from said first electrode structure; and
said first electrode structure includes a first electrode contact region.
2. A filter arrangement comprising the energy conditioner of claim 1 and a conductive line segment of a circuit, wherein said first electrode structure contact region is electrically connected to said conductive line segment.
3. A capacitively/inductively coupling energy conditioner, comprising:
 - an internally floating shield structure;
 - a first electrode structure;
 - a second electrode structure;wherein said first electrode structure comprises at least one first electrode structure first conductive layer, said second electrode structure comprises at least one second electrode structure first conductive layer;
wherein said internally floating shield structure shields said first electrode structure first conductive layer from said second electrode structure, and said internally floating shield structure shields said second electrode structure first conductive layer from said first electrode structure; and

said first electrode structure includes a first electrode capacitive/inductive coupling pad.

4. A filter arrangement comprising the capacitively/inductively coupling energy conditioner of claim 3 and a conductive line segment of a circuit, wherein first electrode capacitive/inductive coupling pad is capacitively/inductively coupled to said conductive line segment.

5. An internally shielded capacitor comprising;
a shielding conductive layer;
a first electrode defining at least a first electrode layer, wherein said first electrode layer is above said shielding conductive layer;
a second electrode defining at least a second electrode layer, wherein said second electrode layer is below said shielding conductive layer;

wherein said shielding, said first electrode, and said second electrode are electrically isolated from one another; and

wherein said first electrode, said second electrode, and said shielding conductive layer are positioned and sized relative to one another such that any straight line passing through said first electrode and said second electrode contacts said shielding conductive layer.

6. An energy conditioner comprising;
a shielding defining at least (1) upper shielding conductive layer, (2) a center shielding conductive layer, and (3) a lower shielding conductive layer, wherein said upper shielding conductive layer is above said center shielding conductive layer and said center shielding conductive layer is above said lower shielding conductive layer;

a first electrode defining at least a first electrode layer, wherein said first electrode layer is below said upper shielding conductive layer and above said center shielding conductive layer;

a second electrode defining at least a second electrode layer, wherein said second electrode layer is below said center shielding conductive layer and above said lower shielding conductive layer; and

wherein said shielding, said first electrode, and said second electrode are electrically isolated from one another; and wherein said first electrode, said second electrode, and said center

shielding conductive layer are positioned and sized relative to one another such that any straight line passing through said first electrode and said second electrode contacts said center shielding conductive layer.

7. The conditioner of claim 6, wherein said shielding further comprises at least one conductive aperture operable for conductively coupling together all of said shielding conductive layers to one another.

8. The conditioner of claim 6, wherein said shielding further comprises at least one conductive via structure operable for conductively coupling together all of said shielding conductive layers to one another.

9. The conditioner of claim 6, wherein said shielding further comprises at least one conductive aperture, wherein said at least one conductive aperture passes through at least said first electrode layer or said second electrode layer; and

wherein said at least one conductive aperture is operable for conductively coupling together all of said shielding conductive layers to one another.

10. The conditioner of claim 6, wherein said shielding further comprises at least one conductive via structure, wherein said at least one conductive via structure passes through at least said first electrode layer or said second electrode layer; and

wherein said at least one conductive via structure is operable for conductively coupling together all of said shielding conductive layers to one another.

11. The energy conditioner of claim 7, wherein said shielding is not operable to be physically coupled to a circuit path.

12. The energy conditioner of claim 8, wherein said shielding is not operable to be physically coupled to a circuit path.

13. A method of making an energy conditioner comprising:
providing an internally floating shield structure;
providing a first electrode structure;
providing a second electrode structure;
wherein said first electrode structure comprises at least one first electrode structure first conductive layer, said second electrode structure comprises at least one second electrode structure first conductive layer;
wherein said internally floating shield structure shields said first electrode structure first conductive layer from said second electrode structure, and said internally floating shield structure shields said second electrode structure first conductive layer from said first electrode structure; and
said first electrode structure includes a first electrode contact region.
14. A method of making filter arrangement comprising (1) an energy conditioner comprising an internally floating shield structure; a first electrode structure; a second electrode structure; wherein said first electrode structure comprises at least one first electrode structure first conductive layer, said second electrode structure comprises at least second electrode structure first conductive layer; wherein said internally floating shield structure shields said first electrode structure first conductive layer from said second electrode structure, and said internally floating shield structure shields said second electrode structure first conductive layer from said first electrode structure; wherein said first electrode structure includes a first electrode contact region and (2) a conductive line segment of a circuit, wherein said first electrode structure contact region is electrically connected to said conductive line segment, comprising the steps of:
providing said energy conditioner;
providing said conductive line segment; and
electrically connecting said conductive line segment to said energy conditioner.
15. A method of making a capacitively/inductively coupling energy conditioner, comprising:
providing an internally floating shield structure;
providing a first electrode structure;

providing a second electrode structure;

wherein said first electrode structure comprises at least one first electrode structure first conductive layer, said second electrode structure comprises at least one second electrode structure first conductive layer;

wherein said internally floating shield structure shields said first electrode structure first conductive layer from said second electrode structure, and said internally floating shield structure shields said second electrode structure first conductive layer from said first electrode structure; and

said first electrode structure includes a first electrode capacitive/inductive coupling pad.

16. The method of making a circuit including the method of claim 15, and further comprising capacitively/inductively coupling said energy conditioner to a conductive line segment.

17. A method of making an internally shielded capacitor comprising;

providing a shielding conductive layer;

providing a first electrode defining at least a first electrode layer, wherein said first electrode layer is above said shielding conductive layer;

providing a second electrode defining at least a second electrode layer, wherein said second electrode layer is below said shielding conductive layer;

wherein said shielding, said first electrode, and said second electrode are electrically isolated from one another; and

wherein said first electrode, said second electrode, and said shielding conductive layer are positioned and sized relative to one another such that any straight line passing through said first electrode and said second electrode contacts said shielding conductive layer.

18. A method of making an energy conditioner comprising;

providing a shielding defining at least (1) upper shielding conductive layer, (2) a center shielding conductive layer, and (3) a lower shielding conductive layer, wherein said upper shielding conductive layer is above said center shielding conductive layer and said center shielding conductive layer is above said lower shielding conductive layer;

providing a first electrode defining at least a first electrode layer, wherein said first electrode layer is below said upper shielding conductive layer and above said center shielding conductive layer;

providing a second electrode defining at least a second electrode layer, wherein said second electrode layer is below said center shielding conductive layer and above said lower shielding conductive layer; and

wherein said shielding, said first electrode, and said second electrode are electrically isolated from one another; and

wherein said first electrode, said second electrode, and said center shielding conductive layer are positioned and sized relative to one another such that any straight line passing through said first electrode and said second electrode contacts said center shielding conductive layer.

19. The method of claim 18, wherein said shielding further comprises at least one conductive aperture operable for conductively coupling together all of said shielding conductive layers to one another.

20. The method of claim 18, wherein said shielding further comprises at least one conductive via structure operable for conductively coupling together all of said shielding conductive layers to one another. 21. (Original) The method of claim 18, wherein said shielding further comprises at least one conductive aperture, wherein said at least one conductive aperture passes through at least said first electrode layer or said second electrode layer; and wherein said at least one conductive aperture is operable for conductively coupling together all of said shielding conductive layers to one another.

22. The method of claim 18, wherein said shielding further comprises at least one conductive via structure, wherein said at least one conductive via structure passes through at least said first electrode layer or said second electrode layer; and

wherein said at least one conductive via structure is operable for conductively coupling together all of said shielding conductive layers to one another.

23. The method of claim 19, wherein said shielding is designed to be physically isolated from a circuit path.
24. The energy conditioner of claim 20, wherein said shielding is designed be physically isolated from a circuit path.
25. A method of using an energy conditioner, said energy conditioner comprising:
an internally floating shield structure; a first electrode structure; a second electrode structure; wherein said first electrode structure comprises at least one first electrode structure first conductive layer, said second electrode structure comprises at least one second electrode structure first conductive layer; wherein said internally floating shield structure shields said first electrode structure first conductive layer from said second electrode structure, and said internally floating shield structure shields said second electrode structure first conductive layer from said first electrode structure; and said first electrode structure includes a first electrode contact region, said method comprising:
connecting said energy conditioner in an electrical circuit.
26. A method of using a capacitively/inductively coupling energy conditioner, said energy conditioner comprising: an internally floating shield structure; a first electrode structure; a second electrode structure; wherein said first electrode structure comprises at least one first electrode structure first conductive layer, said second electrode structure comprises at least one second electrode structure first conductive layer; wherein said internally floating shield structure shields said first electrode structure first conductive layer from said second electrode structure, and said internally floating shield structure shields said second electrode structure first conductive layer from said first electrode structure; and said first electrode structure includes a first electrode capacitive/inductive coupling pad, said method comprising:
connecting said energy conditioner in an electrical circuit.
27. A method of using an internally shielded capacitor, said internally shielded capacitor comprising: a shielding conductive layer; a first electrode defining at least a first electrode layer,

wherein said first electrode layer is above said shielding conductive layer; a second electrode defining at least a second electrode layer, wherein said second electrode layer is below said shielding conductive layer; wherein said shielding, said first electrode, and said second electrode are electrically isolated from one another; and wherein said first electrode, said second electrode, and said shielding conductive layer are positioned and sized relative to one another such that any straight line passing through said first electrode and said second electrode contacts said shielding conductive layer, said method comprising:

connecting said internally shielded capacitor in an electrical circuit.

28. A method of using an energy conditioner, said energy conditioner comprising: a shielding defining at least (1) upper shielding conductive layer, (2) a center shielding conductive layer, and (3) a lower shielding conductive layer, wherein said upper shielding conductive layer is above said center shielding conductive layer and said center shielding conductive layer is above said lower shielding conductive layer; a first electrode defining at least a first electrode layer, wherein said first electrode layer is below said upper shielding conductive layer and above said center shielding conductive layer; a second electrode defining at least a second electrode layer, wherein said second electrode layer is below said center shielding conductive layer and above said lower shielding conductive layer; and wherein said shielding, said first electrode, and said second electrode are electrically isolated from one another; and wherein said first electrode, said second electrode, and said center shielding conductive layer are positioned and sized relative to one another such that any straight line passing through said first electrode and said second electrode contacts said center shielding conductive layer, said method comprising:

connecting said energy conditioner in an electrical circuit.

29. The method of claim 28, wherein said shielding further comprises at least one conductive aperture operable for conductively coupling together all of said shielding conductive layers to one another.

30. The method of claim 28, wherein said shielding further comprises at least one conductive via structure operable for conductively coupling together all of said shielding conductive layers

to one another.

31. The method of claim 28, wherein said shielding further comprises at least one conductive aperture, wherein said at least one conductive aperture passes through at least said first electrode layer or said second electrode layer; and

wherein said at least one conductive aperture is operable for conductively coupling together all of said shielding conductive layers to one another.

32. The method of claim 28, wherein said shielding further comprises at least one conductive via structure, wherein said at least one conductive via structure passes through at least said first electrode layer or said second electrode layer; and

wherein said at least one conductive via structure is operable for conductively coupling together all of said shielding conductive layers to one another.

33. The method of claim 29, wherein said shielding is designed to be physically isolated from a circuit path.

34. The method of claim 30, wherein said shielding is designed to be physically isolated from a circuit path.